# DEPARTMENT OF THE AIR FORCE

DETACHMENT 3, AIR FORCE INSTITUTE FOR OPERATIONAL HEALTH
(AFIOH) (AFMC)
APO AP 96368-5213

12 Apr 04

# MEMORANDUM FOR 8 MDOS/SGOAB APO AP 96264-2021

FROM: Det 3, AFIOH/CDR

Unit 5213 APO AP 96368

SUBJECT: Consultative Letter (CL), IOH-DO-BR-CL-2003-0026, Radio Frequency Radiation (RFR) Program Review, Kunsan AB, ROK

- **1. Introduction:** This CL documents a review of your RFR program that was conducted from 10 15 Dec 03. AFI 48-9, *Radio Frequency Radiation Safety Program*, directs the Bioenvironmental Engineering Flight (BEF) to manage their installation's RFR safety program. As part of this program, BEF maintains an up-to-date inventory of RFR emitters, conducts initial and periodic assessments of RFR emissions, and assists unit commanders in the development of RFR safety awareness training programs.
- **2. Scope:** The following Kunsan AB workplaces were visited as requested by the BEF office: Radio Maintenance, Wide Band Maintenance, Precision Guided Munitions, 43<sup>rd</sup> Air Defense Artillery Echo Battery, and 43<sup>rd</sup> Defense Artillery Foxtrot Battery. In addition to workplace visits, BEF inventories, RFR evaluations, and RFR safety awareness training plans were reviewed. For each workplace, the following items were accomplished as part of this RFR safety program review.
  - a. Review and update of RFR emitter inventory records (AF Forms 2759).
  - b. Review of RFR training.
  - c. Survey of new Radio Frequency (RF) emitters and/or completion of hazard distance calculations. Note that RFR survey meter information is contained in attachment 1.

# 3. Personnel Contacted:

<u>Name</u>	Office Symbol	<u>Duty Title</u>
Maj Ronald Dell	8 MDOS/SGOAB	Bioenvironmental Engineering Element
		Commander
TSgt Yvette Yliniemi	8 MDOS/SGOAB	Bioenvironmental Engineering Technician
CW2 Weston	Echo Battery	Systems Maintenance Technician
CW2 Olsen	Foxtrot Battery	Systems Maintenance Technician
TSgt Sheridan Webster	8 CS/SCMG	NCOIC, Radio Maintenance
MSgt Mark Morgan	8 MXS/MXMWPM	Superintendent Precision Guided Munitions (PGM)
SSgt Timothy Boldt	8 MXS/MXMWPM	NCOIC, PGM Support
SrA Ferrell	8 MXS/MXMWPM	PGM Crew Member
SSgt Eric Allec	8 CS/SCMGW	NCOIC, Wide Band Maintenance

Distribution Statement: Approved for Public Release; Distribution Unlimited

# 4. Findings:

- a. Radio Maintenance. The RF emitter inventory was updated and hazard distance calculations were completed. RF emitter forms are included in attachment 2. RFR measurements were made in assessable areas by transmitter cabinets, transmission lines, and dummy load devices (Termaline coaxial resistors). No RFR leakage was noted above 0.1 milliwatts per centimeter squared (mW/cm²). Antennas are elevated and inaccessible to personnel other than antenna maintenance personnel.
- b. Wide Band Maintenance. This shop maintains three microwave digital radio systems. One is located outside building 919 and two are located at the Okmasan site. RFR measurements were made in assessable areas by the transmitter cabinet located at building 919 and along the transmission line (traveling wave tube) leading to the antenna. RFR leakage measurements were below 0.1 mW/cm². BEF RF emitter forms were current for this shop. RFR measurement information was therefore documented on existing forms. The Okmasan site was not visited during this review.
- c. Precision Guided Munitions. This shop uses an AN/GJM-65 missile test set to evaluate AGM-130 guided missiles. RFR measurements were made during the evaluation of an AGM-130 guided missile. A test coupler (RF hat) is used to minimize potential RFR exposure and is required by T.O. 33D7-77-81-1. RFR measurements ranged from less than 0.1 1.8 mW/cm², which is well below the permissible exposure limit of 10 mW/cm² for controlled areas. Attachment 3 contains RF emitter information and details on RFR leakage measurements.
- d. 43<sup>rd</sup> Air Defense Artillery Echo & Foxtrot Batteries. The Echo and Foxtrot Batteries maintain and operate the Patriot Missile Air Defense System that utilizes a phased-array radar (AN/MPQ-65). The Interrogator set (AN/TPX-46(v)7) is a transmitter/receiver, Identification Friend or Foe (IFF) system, and an integral part of the Patriot Missile Air Defense System. RFR measurements were made at both sites during low and high power operations. The measured RFR hazard distance was significantly less than the specified distance in Army T.M. 9-1430-601-10-1. Note that the phased-array radar can be set in a number of classified modes that can significant change the potential hazard distance. Therefore, the area within hazard distances specified in T.M. 9-1430-601-10-1 is controlled. Updated RF emitter and survey information is located in attachments 4 and 5 for the Echo and Foxtrot Batteries.
- **5. Recommendations and Conclusions:** Kunsan AB RFR safety program records are up-to-date and meet AFI requirements. RFR emitter inventories, evaluations, and training indicate proper oversight of base RFR safety and awareness concerning potentially exposed personnel. Recommend that the Bioenvironmental Engineering Element continue appropriate surveillance of work areas with RF emitters and assist each supervisor with RFR awareness training programs.
- **6.** If you have any questions, please contact me at DSN 634-2636 or via e-mail at bruce.goplin@kadena.af.mil.

BRUCE A. GOPLIN, Capt, USAF, BSC Chief, Radiation Services Branch

5 Atch:

- 1. Survey Equipment Information
- 2. Radio Maintenance RF Emitter Form
- 3. PGM RF Emitter Form
- 4. Echo Battery RF Emitter Form
- 5. Foxtrot Battery RF Emitter Form

# **Survey Equipment Information**

Survey meter type: Narda Broadband Isotropic Survey Monitor

Model number: 8716

Serial number: 11036

Calibration date: 22 Feb 03

Probes:

Narda Isotropic Conformal E-Field Probe (0.3 – 40 GHz)

Model: 8722B

Calibration date: 22 Feb 03

Narda Isotropic E-Field Probe (0.3 – 1000 MHz)

Model: 8760

Serial number: 08008 Calibration date: 22 Feb 03

Narda Broadband leakage E-Field Probe (2- 10 GHz)

Model: 8760

Serial number: 08008 Calibration date: 22 Feb 03

RADIOFREQUENCY EMITTER SURVEY  DATE (D			MYY) WORKPLACE 0608-CORR-211A Dec 03 IDENTIFIER				
				BASE	Kunsa	an AB	ORGANIZATION 8 CS
				WORKPLACE		Radio M	aintenance
				BLDG NO/LOCA	TION 52	ROOM/AREA	
NAME OF CONTACT	GRADE	POS	SITION	ORGANIZATION/OFFICE SYMBOL			DUTY PHONE
Vebster	TSgt	NC	OIC		8 CS/SCMG		782-4919
	1		ATION AND CONT		<u> </u>		
NOMENCLATURE	AN/GI	RC-171	AN/GI	RC-171	AN/GF	RC-171	AN/GRC-171
DESCRIPTION	UHF Tra	nscievers	UHF Tra	nscievers	UHF Tra	nscievers	UHF Transcievers
LOCATION OF EMITTERS	Bldg	Bldg 2829 Bldg 13		1305	Bldg	911	Bldg 950
QUANTITY		2	1		1		2
FREQUENCY (MHZ)	225-3	99.975	225-3	399.975 22		99.975	225-399.975
PULSE WIDTH (microsec.)	C	:W	C	CW CV		W	CW
PULSE REPETITION FREQUENCY (pps	) N	IA	١	NA		Α	NA
PEAK POWER (KW)	0.0	025	0.0	025	0.025		0.025
ANTENNA CODE							
ANTENNA SIZE (ft.) (hor./ver.)	2.1	/1.5	2.1	/1.5	2.1/1.5		2.1/1.5
ANTENNA GAIN (dB)	0.3	1	С	).3	0	.3	0.3
SCANNING CODE		F		F	F	=	F
SCAN RATE (rpm)	N	IA.	N	IA.	N	Α	NA
PERMISSIBLE EXPOSURE LIMIT (mW/cm2)		: - 1.0 nt - 0.2		: - 1.0 nt - 0.2		- 1.0 nt - 0.2	cont - 1.0 uncont - 0.2
ESTIMATED HAZARD DISTANCE (ft)		ed - 1.5 ft : 3.4 ft		ed - 1.5 ft : 3.4 ft		ed - 1.5 ft 3.4 ft	controlled - 1.5 ft uncont 3.4 ft
HAZARD CODE(S)		Н		Н	II	Η	IH
HAZARD CONTROL CODE(S)	N	IR	N	IR	N	R	NR
HAZARD DISTANCE MEASUREMENTS (ft)	Not Re	equired	Not R	equired	Not Re	equired	Not Required
REPARED BY (Name, Grade,AFSC)			REVIEWED BY (I	Name, Grade, AFS0	C)		<u> </u>
BRUCE A. GOPLIN,	Capt, USAF, 43	3Y3					

				PERIODIC CHECKS		
CHECK FREQUE	ENCY	[	✓ ANNUALLY	QUARTERLY	OTHER	
DATE (DD MMM YY)	SIGNS CURRENT	PROCEDURES ADEQUATE		OTHER		CHECKED BY



# AN/GRC-171

 $f = 225-399.975 \text{ MHz}; \text{ PEL} = 1.0 \text{ mW/cm}^2_{\text{Controlled}} = 0.2 \text{ mW/cm}^2_{\text{uncontrolled}}$ 

 $P_a$  = average power (watts) = 25 w

 $G_{abs}$  = absolute gain =  $10^{G/10} = 10^{.03} = 1.07 \text{ dB}$ 

Hazard distance in meters =  $[(p_a \times g_n) / (40 \times pi \times PEL)]^{\frac{1}{2}}$ 

= 0.5 meters (controlled) 1.0 meters (uncontrolled)

= 1.5 feet (controlled) 3.4 feet (uncontrolled)

# Hazard Control Codes

RADIOFREQUENCY EMITTE			WORKPLACE 0608-CORR-211A IDENTIFIER			
		•		BASE	Kunsan AB	ORGANIZATION 8 CS
				WORKPLACE	Radio M	laintenance
				BLDG NO/LOCA	TION ROOM/AREA 52	
NAME OF CONTACT	GRADE	POS	ITION		TION/OFFICE SYMBOL	DUTY PHONE
Webster	TSgt	NC	OIC	DIC 8 CS/SCI		782-4919
NOMENCLATURE	AN/GI	RC-171	ATION AND CONT AN/GI	ROL DATA	AN/GRC-211	AN/GRC-171
DESCRIPTION	UHF Tra	nscievers	UHF Tra	inscievers	VHF Transcievers	VHF Transcievers
LOCATION OF EMITTERS	Bldg	Bldg 2548 Bldg 9		g 902	Bldg 2829	Bldg 1305
QUANTITY		1	1		3	2
FREQUENCY (MHZ)	225-3	99.975	225-3	99.975	116 - 149.9	116 - 149.9
PULSE WIDTH (microsec.)	C	W	C	W	CW	CW
PULSE REPETITION FREQUENCY (pps	) N	IA	١	NA	NA	NA
PEAK POWER (KW)	0.0	025	0.	025	0.025	0.025
ANTENNA CODE						
ANTENNA SIZE (ft.) (hor./ver.)	2.1	/1.5	2.1	/1.5	.08/5	.08/5
ANTENNA GAIN (dB)	0.3	i e	C	).3	0.3	0.3
SCANNING CODE		F		F	F	F
SCAN RATE (rpm)	N	IA	N	NA .	NA	NA
PERMISSIBLE EXPOSURE LIMIT (mW/cm2)		: - 1.0 nt - 0.2		t - 1.0 nt - 0.2	cont - 1.0 uncont - 0.2	cont - 1.0 uncont - 0.2
ESTIMATED HAZARD DISTANCE (ft)		ed - 1.5 ft 3.4 ft		ed - 1.5 ft t 3.4 ft	controlled - 1.5 ft uncont 3.4 ft	controlled - 1.5 ft uncont 3.4 ft
HAZARD CODE(S)	ı	Н	1	Н	IH	IH
HAZARD CONTROL CODE(S)	N	IR	N	IR	NR	NR
HAZARD DISTANCE MEASUREMENTS (ft)	Not Ro	equired	Not R	equired	Not Required	Not Required
PREPARED BY (Name, Grade, AFSC)	0 (11217	2) (0	REVIEWED BY (I	Name, Grade, AFS0	<u>l</u> C)	ı
BRUCE A. GOPLIN,	Capt, USAF, 4	373				

				PERIODIC CHECKS		
CHECK FREQUENCY			✓ ANNUALLY	QUARTERLY	OTHER	
	SIGNS CURRENT	PROCEDURES ADEQUATE		OTHER		CHECKED BY



AN/GRC-171

### AN/GRC-171

 $f = 116 - 399.975 \text{ MHz}; \text{ PEL} = 1.0 \text{ mW/cm}^2_{\text{Controlled}} = 0.2 \text{ mW/cm}^2_{\text{uncontrolled}}$ 

 $P_a$  = average power (watts) = 25 w

 $G_{abs}$  = absolute gain =  $10^{G/10}$  =  $10^{0.03}$  = 1.07 dB

Hazard distance in meters =  $[(p_a \times g_n) / (40 \times pi \times PEL)]^{\frac{1}{2}}$ 

= 0.5 meters (controlled) 1.0 meters (uncontrolled)

= 1.5 feet (controlled) 3.4 feet (uncontrolled)

#### AN/GRC-211

 $f = 116 - 149.9 \text{ MHz}; \text{ PEL} = 1.0 \text{ mW/cm}^2_{\text{Controlled}} = 0.2 \text{ mW/cm}^2_{\text{uncontrolled}}$ 

 $P_a$  = average power (watts) = 25 w

 $G_{abs}$  = absolute gain =  $10^{G/10}$  =  $10^{00.3}$  = 1.07 dB

= 0.5 meters (controlled) 1.0 meters (uncontrolled)

= 1.5 feet (controlled) 3.4 feet (uncontrolled)

# Hazard Control Codes

RADIOFREQUENCY EMITTER SURVEY  DATE (DI			WORKPLACE 0608-CORR-211A Dec 03				
				BASE	Kuns	an AB	ORGANIZATION 8 CS
				WORKPLACE		Radio M	aintenance
				BLDG NO/LOCA	TION 52	ROOM/AREA	
NAME OF CONTACT	GRADE	POS	ITION		TION/OFFICE SYN	MBOL	DUTY PHONE
Webster	TSgt	NC	OIC	8 CS/SCMG		782-4919	
		HAZARD EVALUA	ATION AND CONT	ROL DATA	I		T
NOMENCLATURE	AN/GF	RC-211	AN/GI	RC-211	AN/GF	RC-211	AN/VRC-83
DESCRIPTION	VHF Tra	nscievers	VHF Tra	nscievers	VHF Tra	nscievers	VHF/UHF Transciever
LOCATION OF EMITTERS	Bldg	902	Bldç	g 950	Bldg	2548	Bldg 1305
QUANTITY		1		2	1		1
FREQUENCY (MHZ)	116 -	149.9	116 -	149.9 116 - 1		149.9	116 - 149.9 / 225 - 399.975
PULSE WIDTH (microsec.)	С	W	C	cw cw		W	CW
PULSE REPETITION FREQUENCY (pps)	Ν	Α	١	NA NA		IA	NA
PEAK POWER (KW)	0.0	)25	0.0	025	0.0	)25	0.03
ANTENNA CODE							
ANTENNA SIZE (ft.) (hor./ver.)	.08	3/5	.0	8/5	.08	8/5	VHF08/5 UHF - 2.1/1.5
ANTENNA GAIN (dB)	0.3		С	).3	0	.3	0.3
SCANNING CODE	!	=		F	!	F	F
SCAN RATE (rpm)	N	Α	N	IA.	N	IA	NA
PERMISSIBLE EXPOSURE LIMIT (mW/cm2)		- 1.0 nt - 0.2		: - 1.0 nt - 0.2		- 1.0 nt - 0.2	cont - 1.0 uncont - 0.2
ESTIMATED HAZARD DISTANCE (ft)		ed - 1.5 ft 3.4 ft		ed - 1.5 ft i 3.4 ft		ed - 1.5 ft 3.4 ft	controlled - 1.7 ft uncont 3.7ft
HAZARD CODE(S)		Н		Н		Н	IH
HAZARD CONTROL CODE(S)	N	R	N	NR NR		IR	NR
HAZARD DISTANCE MEASUREMENTS (ft)	Not Re	equired	Not R	equired	Not Re	equired	Not Required
PREPARED BY (Name, Grade, AFSC)	ont 110AF 41	9V2	REVIEWED BY (I	Name, Grade, AFS	C)		1
BRUCE A. GOPLIN, Ca	aμι, υδΑΕ, 43	013					

				PERIODIC CHECKS		
			ANNUALLY	QUARTERLY	OTHER	
		PROCEDURES ADEQUATE		OTHER		CHECKED BY



AN/VRC-83

### AN/GRC-211

 $f = 116 - 149.9 \text{ MHz}; \text{ PEL} = 1.0 \text{ mW/cm}^2_{\text{Controlled}} \quad 0.2 \text{ mW/cm}^2_{\text{uncontrolled}}$ 

 $P_a$  = average power (watts) = 25 w

 $G_{abs}$  = absolute gain =  $10^{G/10}$  =  $10^{0.03}$  = 1.07 dB

Hazard distance in meters =  $[(p_a \times g_n) / (40 \times pi \times PEL)]^{\frac{1}{2}}$ 

= 0.5 meters (controlled) 1 meters (uncontrolled)

= 1.5 feet (controlled) 3.4 feet (uncontrolled)

#### AN/VRC-83

 $f = 116 - 149.9/225 - 399.975 \text{ MHz}; \text{ PEL} = 1.0 \text{ mW/cm}^2_{\text{Controlled}} = 0.2 \text{ mW/cm}^2_{\text{uncontrolled}}$ 

 $P_a$  = average power (watts) = 30 w

 $G_{abs}$  = absolute gain =  $10^{G/10}$  =  $10^{0.03}$  = 1.07 dB

= 0.5 meters (controlled) 1.1 meters (uncontrolled)

= 1.7 feet (controlled) 3.7 feet (uncontrolled)

# Hazard Control Codes

RADIOFREQUENCY EMITTER	DATE (DD MMM 10 D	WORKPLACE 0608-CORR-211A Dec 03					
				BASE	Kuns	an AB	ORGANIZATION 8 CS
				WORKPLACE		Radio M	aintenance
				BLDG NO/LOCA	TION 52	ROOM/AREA	
NAME OF CONTACT	GRADE	POS	ITION		TION/OFFICE SYN	MBOL	DUTY PHONE
Webster	TSgt	NC	OIC 8 CS/SCMG			782-4919	
		HAZARD EVALUA	ATION AND CONT	ROL DATA	I		1
NOMENCLATURE	AN/VI	RC-83	AN/G	RT-21	AN/G	RT-21	AN/GRT-22
DESCRIPTION		/UHF cievers	VHF Tra	nscievers	VHF Tra	nscievers	UHF Transciever
LOCATION OF EMITTERS	Bldg	915	Bldç	g 952	Bldg	2829	Bldg 952
QUANTITY		1		9		1	25
FREQUENCY (MHZ)		149.9/ 399.975	116 -	149.9 116 - 14		149.9	225 - 399.975
PULSE WIDTH (microsec.)	С	W	C	w cw		W	CW
PULSE REPETITION FREQUENCY (pps)	N	IA	١	NA NA		Α	NA
PEAK POWER (KW)	0.	03	0.01	- 0.05	0.01	- 0.05	0.01 - 0.05
ANTENNA CODE							
ANTENNA SIZE (ft.) (hor./ver.)		08/5 2.1/1.5	.0	5/6	.0	5/6	0.05/6
ANTENNA GAIN (dB)	0.3		1	.5	1	.5	1.5
SCANNING CODE	I	F		F		Ξ	F
SCAN RATE (rpm)	N	IA	N	IA	N	Α	NA
PERMISSIBLE EXPOSURE LIMIT (mW/cm2)		- 1.0 nt - 0.2		: - 1.0 nt - 0.2		- 1.0 nt - 0.2	cont - 1.0 uncont - 0.2
ESTIMATED HAZARD DISTANCE (ft)		ed - 1.7 ft 5.5 ft		ed - 2.1 ft : 4.6 ft		ed - 2.5 ft 5.5 ft	controlled - 2.5 ft uncont 5.5 ft
HAZARD CODE(S)		Н		Н	I	Н	IH
HAZARD CONTROL CODE(S)	N	IR	N	IR	N	R	NR
HAZARD DISTANCE MEASUREMENTS (ft)	Not Re	equired	Not R	equired	Not Re	equired	Not Required
PREPARED BY (Name, Grade,AFSC)  BRUCE A. GOPLIN, Ca	apt, USAF. 43	3Y3	REVIEWED BY (I	Name, Grade, AFS	C)		1

				PERIODIC CHECKS		
CHECK FREQUE	NCY	[	ANNUALLY	QUARTERLY	OTHER	
DATE (DD MMM YY)	SIGNS CURRENT	PROCEDURES ADEQUATE		OTHER		CHECKED BY





AN/VRC-83 AN/GRT-22

AN/VRC-83

 $f = 116 - 149.9/225 - 399.975 \text{ MHz}; \text{ PEL} = 1.0 \text{ mW/cm}^2_{\text{Controlled}} = 0.2 \text{ mW/cm}^2_{\text{uncontrolled}}$ 

 $P_a$  = average power (watts) = 30 w;  $G_{abs}$  = absolute gain =  $10^{G/10}$  =  $10^{0.03}$  = 1.07 dB

Hazard distance in meters =  $[(p_a \times g_n) / (40 \times pi \times PEL)]^{\frac{1}{2}}$ 

= 0.5 meters (controlled) 1.1 meters (uncontrolled)

= 1.7 feet (controlled) 3.7 feet (uncontrolled)

AN/GRT-21

= 0.7 meters (controlled) 1.7 meters (uncontrolled)

= 2.5 feet (controlled) 5.5 feet (uncontrolled)

AN/GRT-22

= 0.7 meters (controlled) 1.7 meters (uncontrolled)

= 2.5 feet (controlled) 5.5 feet (uncontrolled)

Hazard Control Codes

RADIOFREQUENCY EMITTER			WORKPLACE 0608-CORR-211A IDENTIFIER						
				BASE	Kunsan AB	ORGANIZATION 8 CS			
				WORKPLACE	Radio M	laintenance			
				BLDG NO/LOCATION ROOM/AREA 952					
NAME OF CONTACT	GRADE	POS	ITION	_	TION/OFFICE SYMBOL	DUTY PHONE			
Webster	TSgt	NC	COIC 8		8 CS/SCMG	782-4919			
		HAZARD EVALUA				1			
NOMENCLATURE	AN/G	RT-22	AN/G	GRT-22	AN/GRC-238	AN/GRC-238			
DESCRIPTION	UHF Tra	ansciever	UHF Tra	ansciever	VHF/UHF Transcievers	VHF/UHF Transcievers			
LOCATION OF EMITTERS	Bldg	2829 Bldg 1		1305	Bldg 1305	Bldg 911			
QUANTITY		1	2		2	1			
FREQUENCY (MHZ)	225 -3	99.975	225 -3	399.975	30-88/136-174 403-470	30-88/136-174 403-470			
PULSE WIDTH (microsec.)	С	W	C	cw	CW	CW			
PULSE REPETITION FREQUENCY (pps)	٨	IA	١	NA .	NA	NA			
PEAK POWER (KW)	0.01	- 0.05	0.01	- 0.05	0.005-0.04	0.005-0.04			
ANTENNA CODE					WH	WH			
ANTENNA SIZE (ft.) (hor./ver.)	.0:	5/6	.0	5/6	1.5, 3, 4	1.5, 3, 4			
ANTENNA GAIN (dB)	1.5		1	.5	0	0			
SCANNING CODE	1	F		F	F	F			
SCAN RATE (rpm)	١	IA	١	NA .	NA	NA			
PERMISSIBLE EXPOSURE LIMIT (mW/cm2)		- 1.0 nt - 0.2		t - 1.0 nt - 0.2	cont - 1.0 uncont - 0.2	cont - 1.0 uncont - 0.2			
ESTIMATED HAZARD DISTANCE (ft)		ed - 2.5 ft 5.5 ft		ed - 2.5 ft t 5.5 ft	controlled - 1.9 ft uncont 4.1 ft	controlled - 1.9 ft uncont 4.1 ft			
HAZARD CODE(S)	ı	Н		Н	IH	IH			
HAZARD CONTROL CODE(S)	N	IR	١	IR	NR	NR			
HAZARD DISTANCE MEASUREMENTS (ft)	Not Re	equired	Not R	equired	Not Required	Not Required			
PREPARED BY (Name, Grade, AFSC)  BRUCE A. GOPLIN, C	apt, USAF, 43	3Y3	REVIEWED BY (I	Name, Grade, AFS0	<b>I</b>	1			

CHECK FREQUENCY  ANNUALLY  QUARTERLY  OTHER  CHECKED BY  CHECKED BY						
CHECK FREQUE	NCY	[	✓ ANNUALLY	QUARTERLY	OTHER	
				OTHER		CHECKED BY





AN/GRT-22

Termaline Coaxial Resistor (Dummy load device)

Hazard distance in meters =  $[(p_a \times g_n) / (40 \times pi \times PEL)]^{\frac{1}{2}}$ 

Hazard distance in feet =  $[[(p_a \times g_n)/(40 \times pi \times PEL)]^{1/2}] \times 3.28$ 

 $P_a$  = average power (watts)

 $G_{abs} = absolute \ gain = 10^{G/10}$ 

PEL = Permissible Exposure Limit in mW/cm<sup>2</sup>

# Hazard Control Codes

RADIOFREQUENCY EMITTER SURVEY  DATE (DD MM 10 [			1 YY) ec 03	WORKPLACE IDENTIFIER	UNUA-UURR-ZIIA				
				BASE	Kuns	an AB	ORGANIZATION 8 CS		
				WORKPLACE		Radio Ma	aintenance		
				BLDG NO/LOCAT	ION	ROOM/AREA			
NAME OF CONTACT	GRADE	POSI	TION		TION/OFFICE SYN	MBOL	DUTY PHONE		
Webster	TSgt	NC	OIC	8 CS/SCMG		782-4919			
	1	HAZARD EVALUA	TION AND CONT	ROL DATA			T		
NOMENCLATURE	AN/PF	RC-113	AN/PF	RC-113	AN/VF	RC-119	AN/TRC-176		
DESCRIPTION		/UHF ciever		/UHF sciever	HF Tran	scievers	VHF/UHF Transcievers		
LOCATION OF EMITTERS	Bldg	2829	Bldg	g 954	Bldg	952	Bldg 911		
QUANTITY		1		2	1		1		
FREQUENCY (MHZ)	116 - 149.9/2	225 - 399.975	116 - 149.9/2	225 - 399.975 1.6 - 29.9		29.999	116 - 149.9/225 - 399.975		
PULSE WIDTH (microsec.)	С	W	C	w cw		W	CW		
PULSE REPETITION FREQUENCY (pps)	N	IA	٨	IA	N	Α	NA		
PEAK POWER (KW)	0.	01	0.	01	0.1	- 0.5	0.01		
ANTENNA CODE	W	/H	٧	/H					
ANTENNA SIZE (ft.) (hor./ver.)	;	3		3	75/	0.1	VHF - 2.1/1.5 UHF - 0.8/5		
ANTENNA GAIN (dB)	0			0		1	0.3		
SCANNING CODE	I	F		F	ſ	=	F		
SCAN RATE (rpm)	N	IA	١	IA	N	Α	NA		
PERMISSIBLE EXPOSURE LIMIT (mW/cm2)		- 1.0 nt - 0.2		: - 1.0 nt - 0.2		- 1.0 nt - 0.2	cont - 1.0 uncont - 0.2		
ESTIMATED HAZARD DISTANCE (ft)		ed - 0.9 ft 2.1 ft		ed - 0.9 ft 2.1 ft		ed - 1.0 ft 2.1 ft	controlled - 7.3 ft uncont 16.4 ft		
HAZARD CODE(S)		Н	ı	Н	- II	Н	IH		
HAZARD CONTROL CODE(S)	N	IR	N	NR		R	NR		
HAZARD DISTANCE MEASUREMENTS (ft)	Not Re	equired	Not Re	Required Not Required		equired	Not Required		
PREPARED BY (Name, Grade,AFSC)  BRUCE A. GOPLIN, C	apt, USAF, 43	3Y3	REVIEWED BY (N	Name, Grade, AFSC	;)		•		

				PERIODIC CHECKS		
CHECK FREQUE	NCY	[	✓ ANNUALLY	QUARTERLY	OTHER	
	SIGNS CURRENT	PROCEDURES ADEQUATE		OTHER		CHECKED BY







AN/PRC-113 AN/VRC-119 AN/TRC-176

Hazard distance in meters =  $[(p_a \times g_n) / (40 \times pi \times PEL)]^{\frac{1}{2}}$ 

Hazard distance in feet =  $[[(p_a \times g_n)/(40 \times pi \times PEL)]^{1/2}] \times 3.28$ 

 $P_a$  = average power (watts)

 $G_{abs}$  = absolute gain =  $10^{G/10}$ 

PEL = Permissible Exposure Limit in mW/cm<sup>2</sup>

Hazard Control Codes

WORRPLACE   BLDG NOLOCATION   952	RADIOFREQUENCY EMITTER SURVEY		`			WORKPLACE 0608-CORR-211A			
RELIGIAD/LOCATION   ROC   RO					BASE	Kunsan AB	ORGANIZATION 8 CS		
NAME OF CONTACT					WORKPLACE	Radio Ma	intenance		
NAME OF CONTACT									
NOMENCLATURE	NAME OF CONTACT	GRADE	POSI	ITION			DUTY PHONE		
NOMENCLATURE	/ebster	TSgt	NC	OIC		8 CS/SCMG	782-4919		
NOMENCLATURE									
NOMENCLATURE									
DESCRIPTION			HAZARD EVALUA	ATION AND CONT	ROL DATA	T			
DESCRIPTION   Transciever	NOMENCLATURE	AN/TF	RC-176	AN/TF	RC-176	AN/TRC-176	AN/TRC-176		
QUANTITY         2         1         1           FREQUENCY (MHZ)         116 - 149.9/225 - 399.975         116 - 149.9/225 - 399.975         116 - 149.9/225           PULSE WIDTH (microsec.)         CW         CW         CW           PULSE REPETITION FREQUENCY (pps)         NA         NA         NA           PEAK POWER (KW)         0.01         0.01         0.01           ANTENNA CODE         VHF08/5         VHF08/5         VHF08/5           ANTENNA SIZE (ft.) (hor./ver.)         VHF08/5         VHF08/5         VHF08/5           UHF - 2.1/1.5         UHF - 2.1/1.5         UHF - 2.1/1.5         UHF - 2.1/1.5           ANTENNA GAIN (dB)         .3/.3         .3/.3         .3/.3           SCANNING CODE         F         F         F           SCAN RATE (rpm)         NA         NA         NA           PERMISSIBLE EXPOSURE LIMIT (mW/cm2)         cont - 1.0 cont - 1.0 uncont - 0.2 uncont - 0.2         uncont - 0.2 uncont - 0.2           ESTIMATED HAZARD DISTANCE (ft)         IH         IH         IH         IH           HAZARD CODE(S)         IH         IH         IH         IH           HAZARD CONTROL CODE(S)         NR         NR         NR         NR           HAZARD DIST	DESCRIPTION		_		_	VHF/UHF Transciever	VHF/UHF Transciever		
FREQUENCY (MHZ) 116 - 149.9/225 - 399.975 116 - 149.9/225	LOCATION OF EMITTERS	Bldg 2901		Bldg	1305	Bldg 2829	Bldg 952		
PULSE WIDTH (microsec.)         CW         CW         CW           PULSE REPETITION FREQUENCY (pps)         NA         NA         NA           PEAK POWER (KW)         0.01         0.01         0.01           ANTENNA CODE         VHF08/5 UHF - 2.1/1.5         VHF08/5 UHF - 2.1/1.5         VHF08 UHF - 2.1/1.5           ANTENNA GAIN (dB)         .3/.3         .3/.3         .3/.3           SCANNING CODE         F         F         F           SCAN RATE (rpm)         NA         NA         NA           PERMISSIBLE EXPOSURE LIMIT (mWicm2)         cont - 1.0 cont - 1.0 uncont - 0.2 uncont - 0.2         controlled - 1.0 ft uncont - 0.2         controlled - 1.0 ft uncont - 2.1 ft         controlled - 1.0 ft uncont - 2.1 ft         controlled - 1.0 ft uncont - 2.1 ft         LIH         IH         IH <t< td=""><td>QUANTITY</td><td colspan="2">2</td><td colspan="2">1</td><td>1</td><td>1</td></t<>	QUANTITY	2		1		1	1		
PULSE REPETITION FREQUENCY (pps)         NA         NA         NA         NA           PEAK POWER (KW)         0.01         0.01         0.01         0.01           ANTENNA CODE         VHF08/5 UHF08/5 UHF - 2.1/1.5         VHF08/5 UHF08/5 UHF - 2.1/1.5         VHF08/5 UHF08/5 UHF08/5 UHF08/5         VHF08/5         VHF08/5         VHF08/5         VHF08/5         VHF08/5         VHF08/5         VHF08/5         VHF08	FREQUENCY (MHZ)	116 - 149.9/225 - 399.975 1		116 - 149.9/2	225 - 399.975	116 - 149.9/225 - 399.975	116 - 149.9/225 - 399.975		
PEAK POWER (KW)   0.01   0.01   0.01	PULSE WIDTH (microsec.)	cw		C	W	CW	CW		
ANTENNA SIZE (ft.) (hor./ver.)  ANTENNA SIZE (ft.) (hor./ver.)  UHF08/5 UHF - 2.1/1.5  VHF08/5 UHF - 2.1/2  UHF - 2.1/1.5  UHF - 2.1/1.5  VHF08/5 UHF08/5 UHF08/5 UHF - 2.1/2  UHF - 2.1/1.5  VHF08/5 UHF08/5 UHF08	PULSE REPETITION FREQUENCY (pps)	NA		N	IA	NA	NA		
ANTENNA SIZE (ft.) (hor./ver.)  VHF08/5 UHF - 2.1/1.5  UHF - 2.1/1.5  UHF - 2.1/1.5  ANTENNA GAIN (dB)  .3/.3  SCANNING CODE  F  NA  NA  NA  PERMISSIBLE EXPOSURE LIMIT (mW/cm²)  Cont - 1.0 uncont - 0.2  Uncont - 0.2  ESTIMATED HAZARD DISTANCE (ft)  HAZARD CODE(S)  IH  HAZARD CONTROL CODE(S)  NOT Required	PEAK POWER (KW)	0.01		0.01		0.01	0.01		
ANTENNA SIZE (ft.) (hor./ver.)  UHF - 2.1/1.5  UHF	ANTENNA CODE								
SCANNING CODE  F  F  R  SCAN RATE (rpm)  NA  NA  NA  NA  PERMISSIBLE EXPOSURE LIMIT (mW/cm2)  Cont - 1.0 Uncont - 0.2  ESTIMATED HAZARD DISTANCE (ft)  HAZARD CODE(S)  NR  NA  NA  NA  NA  NA  NA  NA  NA  NA	ANTENNA SIZE (ft.) (hor./ver.)					VHF08/5 UHF - 2.1/1.5	VHF08/5 UHF - 2.1/1.5		
SCAN RATE (rpm)  NA  NA  NA  PERMISSIBLE EXPOSURE LIMIT (mW/cm2)  ESTIMATED HAZARD DISTANCE (ft)  HAZARD CODE(S)  NR  NA  NA  NA  NA  NA  NA  NA  NA  NA	ANTENNA GAIN (dB)	.3/.3		.3/.3		.3/.3	.3/.3		
PERMISSIBLE EXPOSURE LIMIT (mW/cm2)	SCANNING CODE	I	=		F	F	F		
(mW/cm2)     uncont - 0.2     uncont - 0.2     uncont - 0.2       ESTIMATED HAZARD DISTANCE (ft)     controlled - 1.0 ft uncont 2.1 ft     controlled - 1.0 ft uncont 2.1 ft     uncont 2.1 ft       HAZARD CODE(S)     IH     IH     IH       HAZARD CONTROL CODE(S)     NR     NR     NR       HAZARD DISTANCE MEASUREMENTS (ft)     Not Required     Not Required     Not Required	SCAN RATE (rpm)	N	Α	N	NA	NA NA	NA		
HAZARD DISTANCE (ff) uncont 2.1 ft uncont 2.1 ft uncont 2  HAZARD CODE(S) IH IH IH  HAZARD CONTROL CODE(S) NR NR NR NR  HAZARD DISTANCE MEASUREMENTS (ft) Not Required Not Required						cont - 1.0 uncont - 0.2	cont - 1.0 uncont - 0.2		
HAZARD CONTROL CODE(S)  NR  NR  NR  NR  NR  NR  NR  NR  NOt Required  Not Required  Not Required	ESTIMATED HAZARD DISTANCE (ft)					controlled - 1.0 ft uncont 2.1 ft	controlled - 1.0 ft uncont 2.1 ft		
HAZARD DISTANCE Not Required Not Required Not Required	HAZARD CODE(S)		Η	ı	Н	IH	IH		
MEASUREMENTS (ft)  Not Required Not Required Not Required	HAZARD CONTROL CODE(S)	N	R	N	IR	NR	NR		
PREPARED BY (Name, Grade, AFSC)  REVIEWED BY (Name, Grade, AFSC)		Not Re	equired	Not Ro	equired	Not Required	Not Required		
BRUCE A. GOPLIN, Capt, USAF, 43Y3	,	apt, USAF, 43	3Y3	REVIEWED BY (N	Name, Grade, AFS0	I C)			

				PERIODIC CHECKS		
CHECK FREQUE	NCY	[	ANNUALLY	QUARTERLY	OTHER	
	SIGNS CURRENT	PROCEDURES ADEQUATE		OTHER		CHECKED BY



AN/TRC-176

Hazard distance in meters =  $[(p_a \times g_n) / (40 \times pi \times PEL)]^{\frac{1}{2}}$ 

Hazard distance in feet =  $[[(p_a \times g_n)/(40 \times pi \times PEL)]^{1/2}] \times 3.28$ 

 $P_a$  = average power (watts)

 $G_{abs} = absolute \ gain = 10^{G/10}$ 

PEL = Permissible Exposure Limit in mW/cm<sup>2</sup>

Hazard Control Codes

RADIOFREQUENCY EMITTER SURVEY				WORKPLACE 0608-CORR-211A IDENTIFIER			
				BASE	Kunsan AB	ORGANIZATION 8 CS	
				WORKPLACE	Radio Ma	aintenance	
				BLDG NO/LOCAT			
NAME OF CONTACT	GRADE	POSI	TION		FION/OFFICE SYMBOL	DUTY PHONE	
/ebster	TSgt	NC	OIC		8 CS/SCMG	782-4919	
		HAZARD EVALUA	TION AND CONT	ROL DATA			
NOMENCLATURE	AN/TF	RC-176	AN/TF	RC-176	AN/TRC-187	AN/PRC-139	
DESCRIPTION		/UHF ciever		/UHF sciever	Time of Day Generator	VHF/UHF Transciever	
LOCATION OF EMITTERS	Bldg	Bldg 2548 Bldg		9 915 Bldg 952		Bldg 2548 (sfs)	
QUANTITY	2		1		1	188	
FREQUENCY (MHZ)	116 - 149.9/2	149.9/225 - 399.975 116 - 14		225 - 399.975	225 - 399.975	30-88/136-174 403-470	
PULSE WIDTH (microsec.)	CW		C	W	CW	CW	
PULSE REPETITION FREQUENCY (pps)	NA		٨	IA	NA	NA	
PEAK POWER (KW)	0.	0.01		01	0.01	0.002	
ANTENNA CODE							
ANTENNA SIZE (ft.) (hor./ver.)		08/1.55 2.1/1.5	VHF08/1.55 UHF - 2.1/1.5		.01/2.75	VHF08/5 UHF - 2.1/1.5	
ANTENNA GAIN (dB)	.3/.3		.3/.3		1	.3/.3	
SCANNING CODE	ı	=		F	F	F	
SCAN RATE (rpm)	N	Α	N	IA	NA	NA	
PERMISSIBLE EXPOSURE LIMIT (mW/cm2)		- 1.0 t - 0.2		- 1.0 nt - 0.2	cont - 1.0 uncont - 0.2	cont - 1.0 uncont - 0.2	
ESTIMATED HAZARD DISTANCE (ft)		d - 1.0 ft 2.1 ft		ed - 1.0 ft 2.1 ft	controlled - 1.0 ft uncont 2.3 ft	controlled5 ft uncont 1.0 ft	
HAZARD CODE(S)		Н	I	Н	IH	IH	
HAZARD CONTROL CODE(S)	N	R	N	IR	NR	NR	
HAZARD DISTANCE MEASUREMENTS (ft)	Not Re	equired	Not Required		Not Required	Not Required	

				PERIODIC CHECKS		
CHECK FREQUE	NCY	[	ANNUALLY	QUARTERLY	OTHER	
	SIGNS CURRENT	PROCEDURES ADEQUATE		OTHER		CHECKED BY



AN/TRC-176

Hazard distance in meters =  $[(p_a \times g_n) / (40 \times pi \times PEL)]^{\frac{1}{2}}$ 

Hazard distance in feet =  $[[(p_a \times g_n)/(40 \times pi \times PEL)]^{1/2}] \times 3.28$ 

 $P_a$  = average power (watts)

 $G_{abs} = absolute \ gain = 10^{G/10}$ 

PEL = Permissible Exposure Limit in mW/cm<sup>2</sup>

Hazard Control Codes

RADIOFREQUENCY EMITTER SURVEY		DATE (DD MMN 10 D	MM YY) Dec 03	WORKPLACE 0608-CORR-211A			
			<u> </u>	BASE	Kun	san AB	ORGANIZATION 8 CS
				WORKPLACE		Radio IV	Maintenance
				BLDG NO/LOCA	ation 952	ROOM/AREA	
NAME OF CONTACT	GRADE	POS	SITION		ATION/OFFICE SY	/MBOL	DUTY PHONE
Webster	TSgt	NC	COIC		8 CS/SCMG	3 	782-4919
					-		1
		HAZARD EVALUA	ATION AND CO	NTROL DATA			
NOMENCLATURE	AN/TR	RC-207					
DESCRIPTION		/UHF sciever					
LOCATION OF EMITTERS	Tac	ctical					
QUANTITY	2	2					
FREQUENCY (MHZ)		30-88/136-174 403-470					
PULSE WIDTH (microsec.)	CI	W					
PULSE REPETITION FREQUENCY (pps)	N	NA .					
PEAK POWER (KW)	0.0	002					
ANTENNA CODE	W	VH					
ANTENNA SIZE (ft.) (hor./ver.)	1.5,	, 3, 4					
ANTENNA GAIN (dB)	0						
SCANNING CODE	F	F					
SCAN RATE (rpm)		NA .		_			
PERMISSIBLE EXPOSURE LIMIT (mW/cm2)	uncon	t - 1.0 nt - 0.2					
ESTIMATED HAZARD DISTANCE (ft)		ed - 0.4 ft t 0.9 ft					
HAZARD CODE(S)	ll-	Н					
HAZARD CONTROL CODE(S)	N'	IR	<u> </u>				
HAZARD DISTANCE MEASUREMENTS (ft)	Not Re	equired					
PREPARED BY (Name, Grade,AFSC)  BRUCE A. GOPLIN, Ca	apt, USAF, 43		REVIEWED BY	Y (Name, Grade, AFS)	3)		

				PERIODIC CHECKS		
CHECK FREQUE	NCY	[	ANNUALLY	QUARTERLY	OTHER	
	SIGNS CURRENT	PROCEDURES ADEQUATE		OTHER		CHECKED BY



AN/TRC-207

Hazard distance in meters =  $[(p_a \times g_n) / (40 \times pi \times PEL)]^{\frac{1}{2}}$ 

Hazard distance in feet =  $[[(p_a \times g_n)/(40 \times pi \times PEL)]^{1/2}] \times 3.28$ 

 $P_a$  = average power (watts)

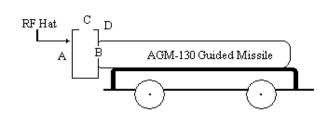
 $G_{abs} = absolute \ gain = 10^{G/10}$ 

PEL = Permissible Exposure Limit in mW/cm<sup>2</sup>

Hazard Control Codes

RADIOFREQUENCY EMITTER SURVEY		DATE (DD MMM 12 De	M YY) ec 03	WORKPLACE 0608 FAAM 240A IDENTIFIER			\AM 240A
		•		BASE	Kuns	san AB	ORGANIZATION  8 MXS
				WORKPLACE	Pre	ecision Guided	d Munitions (PGM)
				BLDG NO/LOCA	TION 345	ROOM/AREA	
NAME OF CONTACT	GRADE	POS	ITION		TION/OFFICE SY	′MBOL	DUTY PHONE
Morgan	MSgt	PGM Supr	port NCOIC	8	MXS/MXMW	/PM	782-4381
				<del> </del>			+
	<u> </u>	HAZARD EVALUA	ATION AND CONT	ROL DATA			
NOMENCLATURE	AGN	Л-130					
DESCRIPTION	tested with t	tuided Missile the AN/GJM- e Test Set					
LOCATION OF EMITTERS	Mis	ssile					
QUANTITY	Classified						
FREQUENCY (MHZ)	Classified						
PULSE WIDTH (microsec.)	Classified						
PULSE REPETITION FREQUENCY (pps)	Classified						
PEAK POWER (KW)	Classified						
ANTENNA CODE	Clas	sified					
ANTENNA SIZE (ft.) (hor./ver.)	Clas	sified					
ANTENNA GAIN (dB)	Clas	sified					
SCANNING CODE	Clas	sified					
SCAN RATE (rpm)		sified					
PERMISSIBLE EXPOSURE LIMIT (mW/cm2)		t - 10 nt - 2.8					
ESTIMATED HAZARD DISTANCE (ft)	N	NA .					
HAZARD CODE(S)	С	DL					
HAZARD CONTROL CODE(S)	С	CA					
HAZARD DISTANCE MEASUREMENTS (ft)	Not R€	equired					
PREPARED BY (Name, Grade,AFSC)  BRUCE A. GOPLIN, Ca	apt, USAF, 43		REVIEWED BY (N	Name, Grade, AFS0	2)		

	PERIODIC CHECKS									
CHECK FREQU	JENCY	[	✓ ANNUALLY	QUARTERLY	OTHER					
DATE (DD MMM YY)	SIGNS CURRENT	PROCEDURES ADEQUATE		OTHER		CHECKED BY				



Location	Measurement in mW/cm <sup>2</sup>
A. Directly behind RF hat	< 0.1
B. Right side of RF hat and AGM-130, 4" to 8"	0.1 – 0.4
C. Top side of RF hat and AGM-130, 4" to 10"	0.2
D. Left side of RF hat and AGM-130, 4" to 8"	0.6 – 1.8

The AN/GJM-65 missile test set is used to test the AGM-130 guided missile. An RF hat (also called a test set coupler) is attached to the AGM-130 guided missile to prevent RF emission during routine test procedures. Note that the use of a test coupler is required by the T.O. The test coupler adequately controls RF emission well below the PEL. Technicians normally stand approximately 5 to 8 feet away from the point of RF emission.

# Hazard Control Codes

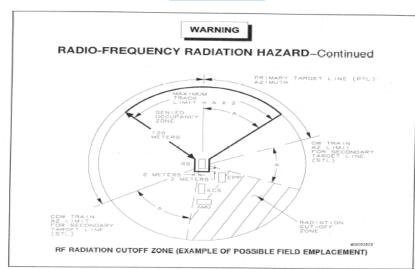
RADIOFREQUENCY EMITTER SURVEY		DATE (DD MMM YY) 11 Dec 03		WORKPLACE IDENTIFIER		0608-F	FAXX-305A
				BASE	Kuns	san AB, ROK	ORGANIZATION 43 <sup>rd</sup> Air Defense Artillery
				WORKPLACE		Echo Pa	atriot Battery
				BLDG NO/LOCA	TION	ROOM/AREA	
NAME OF CONTACT	GRADE	POSI	ITION	ORGANIZA	TION/OFFICE	SYMBOL	DUTY PHONE
Weston	CW-02				Echo Bat	tery	782-7076
	ı	HAZARD EVALUA	ATION AND CONT	ROL DATA	ı		
NOMENCLATURE	AN/M	PQ-65	AN/TP	X-46(v)7			
DESCRIPTION	Patriot phased-array Radar		Interr	ogator			
LOCATION OF EMITTERS	Var	ious	Vai	rious			
QUANTITY	1			1			
FREQUENCY (MHZ)	Classified		Clas	sified			
PULSE WIDTH (microsec.)	Classified		Clas	sified			
PULSE REPETITION FREQUENCY (pps)	Classified		Clas	sified			
PEAK POWER (KW)	Classified		Classified				
ANTENNA CODE	Р	'A	Clas	sified			
ANTENNA SIZE (ft.) (hor./ver.)	Clas	sified	Clas	sified			
ANTENNA GAIN (dB)	Clas	sified	Classified				
SCANNING CODE	I	E		E			
SCAN RATE (rpm)	Clas	sified	Clas	sified			
PERMISSIBLE EXPOSURE LIMIT (mW/cm2)	0	.2	С	).2			
ESTIMATED HAZARD DISTANCE (ft)		2 m at sides back		2 m at sides back			
HAZARD CODE(S)	G	БН	C	ЭН			
HAZARD CONTROL CODE(S)	FE, S	O,WS	FE, S	SO,WS			
HAZARD DISTANCE MEASUREMENTS (ft)	See ba	ck page		ack page			
PREPARED BY (Name, Grade,AFSC)  BRUCE A. GOPLIN, C	apt, USAF, 43	3Y3	REVIEWED BY (I	Name, Grade, AFS0	0)		

				PERIODIC CHECKS		
CHECK FREQUE	NCY	[	✓ ANNUALLY	QUARTERLY	OTHER	
DATE (DD MMM YY)	SIGNS CURRENT	PROCEDURES ADEQUATE		OTHER		CHECKED BY



AN/MPQ-65 & AN/TPX-46(v)7

TM 9-1430-601-10-1



During the survey, the PEL was exceeded at approx. six feet at the front sides and at approx. 20 feet directly in front of the radar at a height of six feet. Note that depending on operator settings, the potential hazard distance can vary significantly. Phased-array settings are classified. RFR hazard distances established in T.M. 9-1430-601-10-1 are therefore followed. The site is controlled at all times. See RFR hazard diagram. (120 meters in front, 2 meters on sides and back).

# Hazard Control Codes

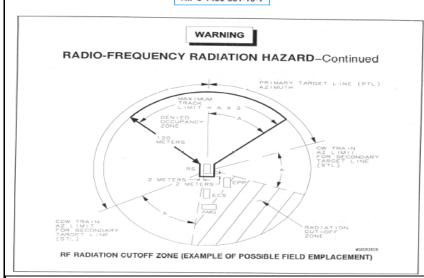
RADIOFREQUENCY EMITTER SURVEY		DATE (DD MMM YY)  11 Dec 03		WORKPLACE 0608-FAXX-304A IDENTIFIER				
		2	-	BASE	Kunsar	n AB, ROK	ORGANIZATION 43 <sup>rd</sup> Air Defense Artillery	
				WORKPLACE Foxtrot Patriot Battery				
				BLDG NO/LOCA	TION	ROOM/AREA		
NAME OF CONTACT	GRADE	GRADE POSITION		ORGANIZATION/OFFICE		YMBOL	DUTY PHONE	
Olson	CW-02			Foxtrot Batte		ery	782-5834/7209	
		HAZARD EVALUA		TROL DATA				
NOMENCLATURE	AN/MPQ-65		AN/TPX-46(v)7					
DESCRIPTION	Patriot phased-array Radar (PAC 3)		Interrogator					
LOCATION OF EMITTERS	Various		Various					
QUANTITY	1		1					
FREQUENCY (MHZ)	Classified		Classified					
PULSE WIDTH (microsec.)	Classified		Classified					
PULSE REPETITION FREQUENCY (pps)	Classified		Classified					
PEAK POWER (KW)	Classified		Classified					
ANTENNA CODE	PA		Classified					
ANTENNA SIZE (ft.) (hor./ver.)	Classified		Classified					
ANTENNA GAIN (dB)	Classified		Classified					
SCANNING CODE	Е		E					
SCAN RATE (rpm)	Classified		Classified					
PERMISSIBLE EXPOSURE LIMIT (mW/cm2)	0.2		0.2					
ESTIMATED HAZARD DISTANCE (ft)	120m front, 2 m at sides and back		120m front, 2 m at sides and back					
HAZARD CODE(S)	GH		GH					
HAZARD CONTROL CODE(S)	FE, SO,WS		FE, SO,WS					
HAZARD DISTANCE MEASUREMENTS (ft)	See back page		See back page					
PREPARED BY (Name, Grade,AFSC)  BRUCE A. GOPLIN, C.	apt, USAF, 43	3Y3	REVIEWED BY (	Name, Grade, AFS0	C)			

PERIODIC CHECKS										
CHECK FREQUENCY		[	✓ ANNUALLY	QUARTERLY	OTHER					
DATE (DD MMM YY)	SIGNS CURRENT	PROCEDURES ADEQUATE		OTHER		CHECKED BY				



AN/MPQ-65 & AN/TPX-46(v)7

TM 9-1430-601-10-1



During the survey, the PEL was exceeded at approx. six feet at the front sides and at approx. 20 feet directly in front of the radar at a height of six feet. Note that depending on operator settings, the potential hazard distance can vary significantly. Phased-array settings are classified. RFR hazard distances established in T.M. 9-1430-601-10-1 are therefore followed. The site is controlled at all times. See RFR hazard diagram. (120 meters in front, 2 meters on sides and back).

# Hazard Control Codes